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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,190	06/15/2006	Brett Anthony Swanson	22409-00159-US	2750
30678 7590 09/23/2008 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20006				
EXAMINER				
ENSEY, BRIAN				
ART UNIT		PAPER NUMBER		
2615				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/526,190

**Applicant(s)**

SWANSON ET AL.

**Examiner**

Brian Ensey

**Art Unit**

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 75-88 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 75-78, 81-85 and 88 is/are rejected.  
7) ☒ Claim(s) 79, 80, 86 and 87 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 02 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date 3/2/05  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Drawings***

Figures 1-9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: See item 100 on page 21, line 11. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 75, 78, 81, 82, 85 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peeters U.S. Patent No. 6,778,858 B1 in view of Harada U.S. Patent No. 5,180,931.

Regarding claim 75, Peeters discloses a method of detecting an envelope of an audio signal comprising the steps of: filtering the audio signal to produce a filtered audio signal (21); rectifying the filtered audio signal to produce a rectified signal (22); detecting peak values of the rectified signal to produce a detected signal (24); sampling the detected signal at predetermined time intervals to produce samples (27) (See Fig. 4 and col. 5, line 33 to col. 6, line 11). Peeters does not expressly disclose resetting the detected signal immediately after sampling. However, Harada discloses a sampling method for sampling a signal at a predetermined periodic rate, holding a peak value and resetting the hold value to the current input waveform value immediately after sampling (See Fig. 3 and col. 3, lines 27-66). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the peak detector

of Peeters with the peak detector as taught by Harada to obtain a high-fidelity sampling output (See Harada abstract).

Regarding claim 82, Peeters discloses an apparatus for detecting an envelope of an audio signal comprising: means for filtering the audio signal to produce a filtered audio signal (21); means for rectifying the filtered audio signal to produce a rectified signal (22); means for detecting the peak values of the rectified signal to produce a detected signal (24); means for sampling the detected signal at predetermined time intervals to produce samples (27) (See Fig. 4 and col. 5, line 33 to col. 6, line 11). Peeters does not expressly disclose means for resetting the means for detecting immediately after sampling, such that the detected signal is reset immediately following sampling. However, Harada discloses a sampling method comprising a means sampling a signal at a predetermined periodic rate, holding a peak value and resetting the hold value to the current input waveform value immediately after sampling (See Fig. 3 and col. 3, lines 27-66). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the peak detector of Peeters with the peak detector as taught by Harada to obtain a high-fidelity sampling output (See Harada abstract).

Regarding claims 78 and 85, the combination of Peeters in view of Harada further discloses the detected peak values remain at a substantially constant value prior to the sampling step (See col. 1, lines 45-66).

Regarding claims 81 and 88, the combination of Peeters in view of Harada further discloses the audio signal is input to a cochlear implant device (See Peeters Fig. 1 and abstract).

Claims 76, 77, 83 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Peeters in view of Harada as applied to claim 75 above, and further in view of the applicant's admitted prior art (AAPA).

Regarding claims 76 and 77, the combination of Peeters in view of Harada discloses a rectifier/compression unit (2) for each audio channel (See Peeters Fig. 4 and col. 5, lines 33-48). The combination of Peeters in view of Harada does not expressly disclose the rectifying step uses half wave rectification or full wave rectification. However, the use of full wave and half wave rectification is well known in the art and the AAPA teaches the use of both half wave (HWR) and full wave rectification (FWR) in processing an audio signal (See AAPA Figures 3-7). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a FWR or HWR as taught by the AAPA to smooth the audio input signal.

Regarding claims 83 and 84, the combination of Peeters in view of Harada discloses a rectifier/compression unit (2) for each audio channel (See Peeters Fig. 4 and col. 5, lines 33-48). The combination of Peeters in view of Harada does not expressly disclose the means for rectifying uses half wave rectifier or full wave rectifier. However, the use of full wave and half wave rectifiers is well known in the art and the AAPA teaches the use of both half wave (HWR) and full wave rectifiers (FWR) in processing an audio signal (See AAPA Figures 3-7). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a FWR or HWR as taught by the AAPA to smooth the audio input signal.

*Allowable Subject Matter*

Claims 79, 80, 86 and 87 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:00 AM - 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Suhan Ni can be reached on 571-272-7505. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, Va. 22313-1450

**Or faxed to:**

(571) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".  
Hand-delivered responses should be brought to:

Customer Service Window  
Randolph Building  
401 Dulany Street  
Arlington, VA 22314

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian Ensey/  
Primary Examiner, Art Unit 2615  
September 19, 2008